

ARALDITE

CY 222

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No.	Material and Supplier	Dose (Gy)	Ultimate flex. strength S (N/mm ²)	Deflexion at break D (mm)	Modulus of elasticity M (N/mm ²)
103 (a)	CY 222 + HY 920 (Pure resin)	0 5×10^6 1×10^7 3×10^7 5×10^7 BBC Baden	15.7 ± 2.0 12.8 ± 1.0	too flexible for testing 5.4 ± 3.6 1.4 ± 0.3	$8.04 \pm 1.32 \times 10^2$ $1.66 \pm 0.13 \times 10^3$
104	CY 222 + HY 920 + 70% glass (cut to fibre)	0 1×10^7 3×10^7 6×10^7 1×10^8 BBC Baden	88.3 ± 8.8 114.8 ± 4.9 89.3 ± 6.9 69.7 ± 3.9 61.8 ± 6.9		$6.87 \pm 1.31 \times 10^3$ $1.02 \pm 0.09 \times 10^4$ $8.34 \pm 0.46 \times 10^3$ $8.44 \pm 0.50 \times 10^3$ $6.07 \pm 2.45 \times 10^3$
105	CY 222 + HY 920 + MICA	0 1×10^7 3×10^7 6×10^7 1×10^8 MICAFIL	91.2 ± 5.9 108.9 ± 2.0 52.0 ± 2.9 33.4 ± 3.9 36.3 ± 3.9	1.6 ± 0.1 3.4 ± 0.2 2.6 ± 0.5 2.3 ± 0.2 2.8 ± 0.4	$1.87 \pm 0.26 \times 10^4$ $1.97 \pm 0.36 \times 10^4$ $4.27 \pm 0.34 \times 10^3$ $2.99 \pm 0.27 \times 10^3$ $2.90 \pm 0.26 \times 10^3$

(a) No graph

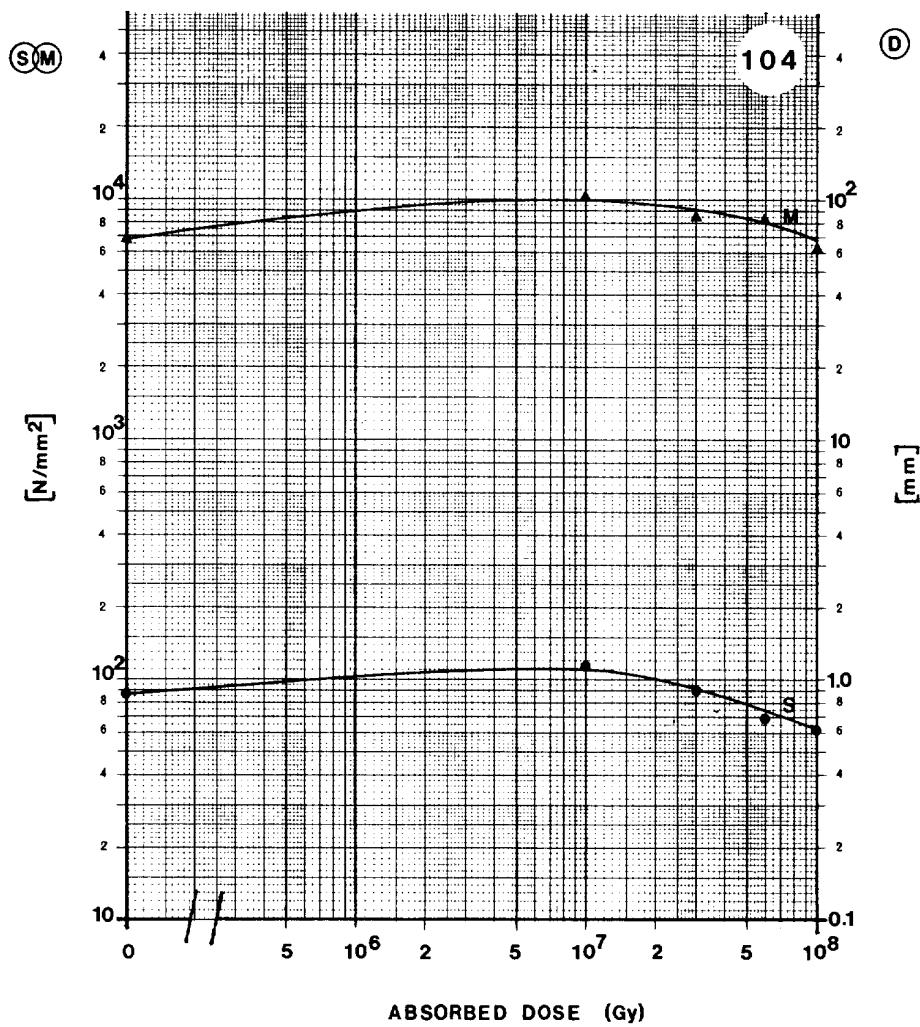
**ARALDITE
CY222**

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MATERIAL: CY 222 + HY 920 + 70% GLASS

SUPPLIER: BBC BADEN

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	88.3 N/mm ²
D	Deflexion at break	mm
M	Modulus of elasticity	6.8 × 10 ³ N/mm ²

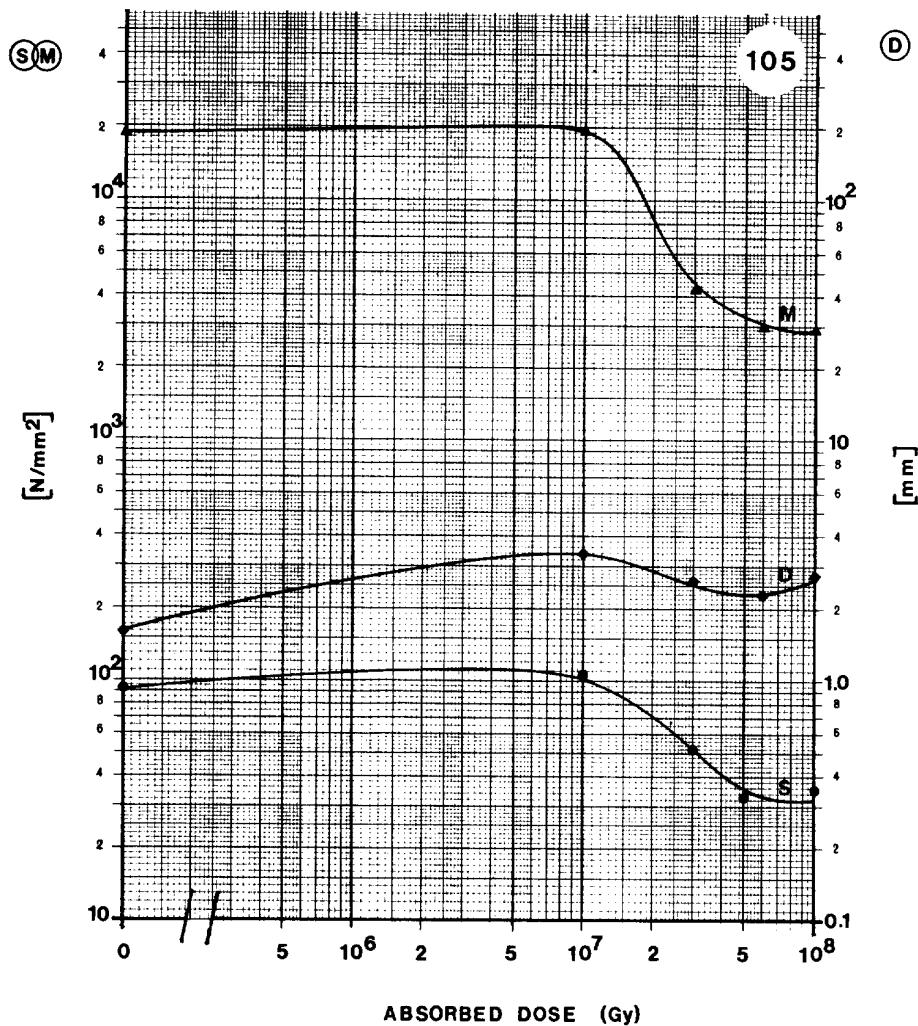
ARALDITE CY 222

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MATERIAL: CY 222 + HY 920 + MICA

SUPPLIER: MICAFIL

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	91.2 N/mm ²
D	Deflection at break	1.6 mm
M	Modulus of elasticity	1.8 × 10 ⁴ N/mm ²

ARALDITE

MY 740

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No.	Material and Supplier	Dose (Gy)	Ultimate flex. strength S (N/mm ²)	Deflexion at break D (mm)	Modulus of elasticity M (N/mm ²)
87	MY 740 + HY 906 + DY 063 LINTOTT	0	130.5 ± 18.6	9.9 ± 3.1	3.08 ± 0.08 × 10 ³
		5 × 10 ⁶	115.8 ± 5.9	10.0 ± 2.0	3.34 ± 0.27 × 10 ³
		1 × 10 ⁷	121.6 ± 31.4	7.7 ± 2.2	3.48 ± 0.18 × 10 ³
		2 × 10 ⁷	103.0 ± 42.2	6.7 ± 3.0	3.48 ± 0.12 × 10 ³
		5 × 10 ⁷	9.8 ± 2.9	0.5 ± 0.2	4.10 ± 0.25 × 10 ³
143	MY 740(100) + MNA(80) + + DMP 30(0.5) + glass PLESSEY	0	283.5 ± 7.8	7.2 ± 0.2	1.58 ± 0.04 × 10 ⁴
		3 × 10 ⁷	263.9 ± 23.5	9.2 ± 0.2	1.38 ± 0.16 × 10 ⁴
		5 × 10 ⁷	197.2 ± 12.8	9.1 ± 0.4	1.02 ± 0.06 × 10 ⁴
144	MY 740(100) + MNA(80) + + DMP 30(0.5) PLESSEY	0	89.3 ± 10.8	6.3 ± 0.9	3.77 ± 0.15 × 10 ³
		1 × 10 ⁷	84.4 ± 25.5	6.4 ± 2.4	3.96 ± 0.22 × 10 ³
		3 × 10 ⁷	27.5 ± 23.5	1.9 ± 1.7	3.68 ± 0.04 × 10 ³

ARALDITE

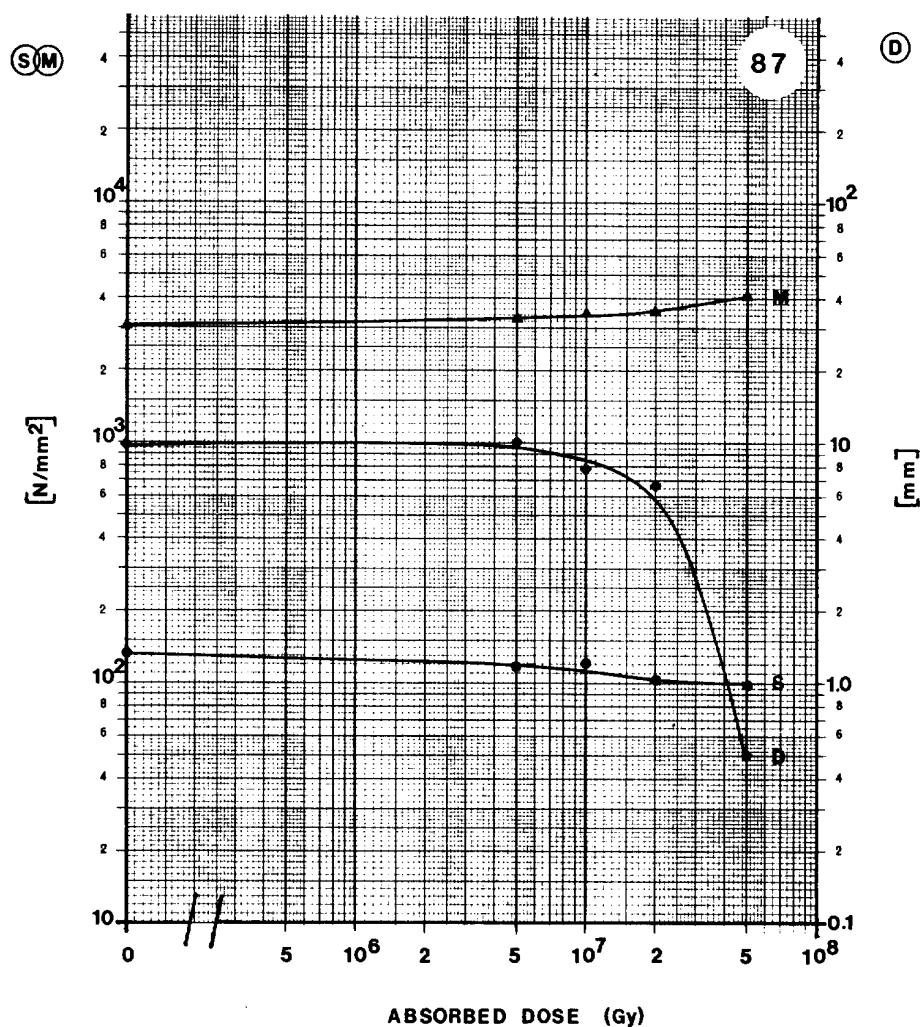
MY 740

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MATERIAL: MY 740 + HY 906 + DY 063

SUPPLIER: LINTOTT

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	130.5 N/mm ²
D	Deflexion at break	9.9 mm
M	Modulus of elasticity	3.1 x 10 ³ N/mm ²

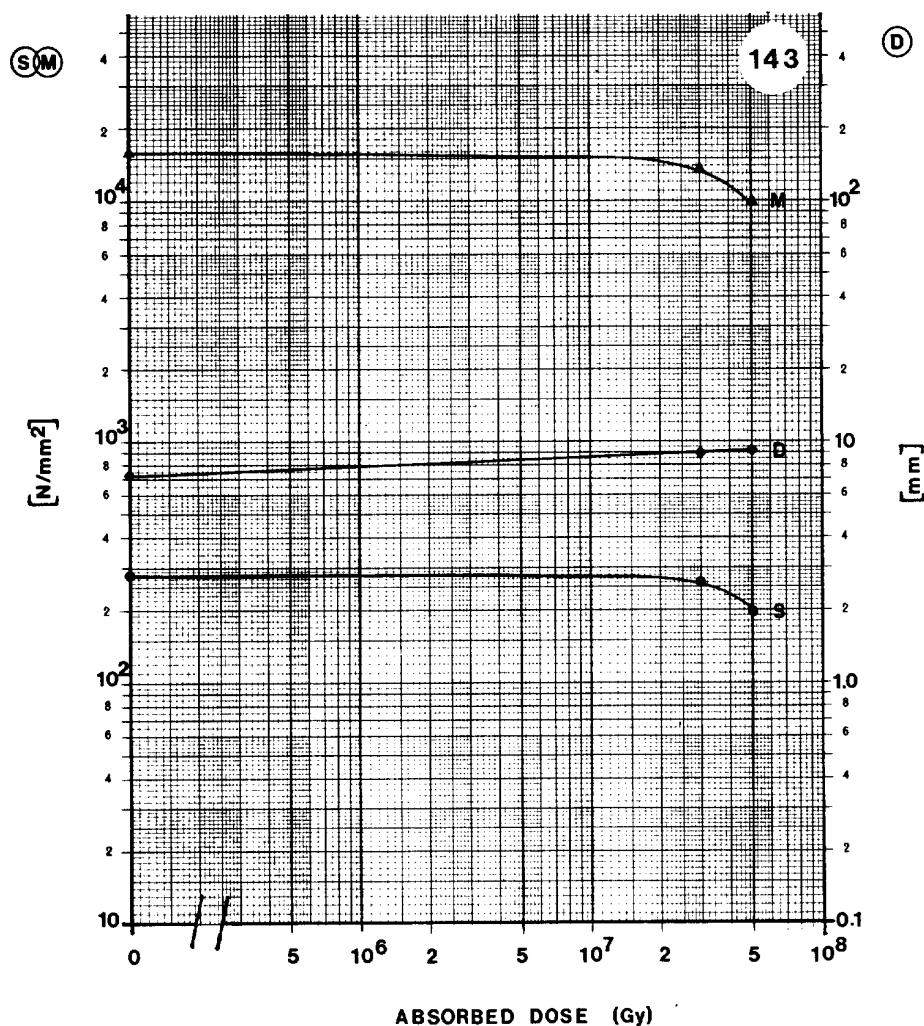
ARALDITE MY 740

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MATERIAL: MY 740(100) + MNA(80) + DMP 30(0.5) + GLASS

SUPPLIER: PLESSEY

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	283.5 N/mm ²
D	Deflection at break	7.2 mm
M	Modulus of elasticity	1.6×10^8 N/mm ²

ARALDITE

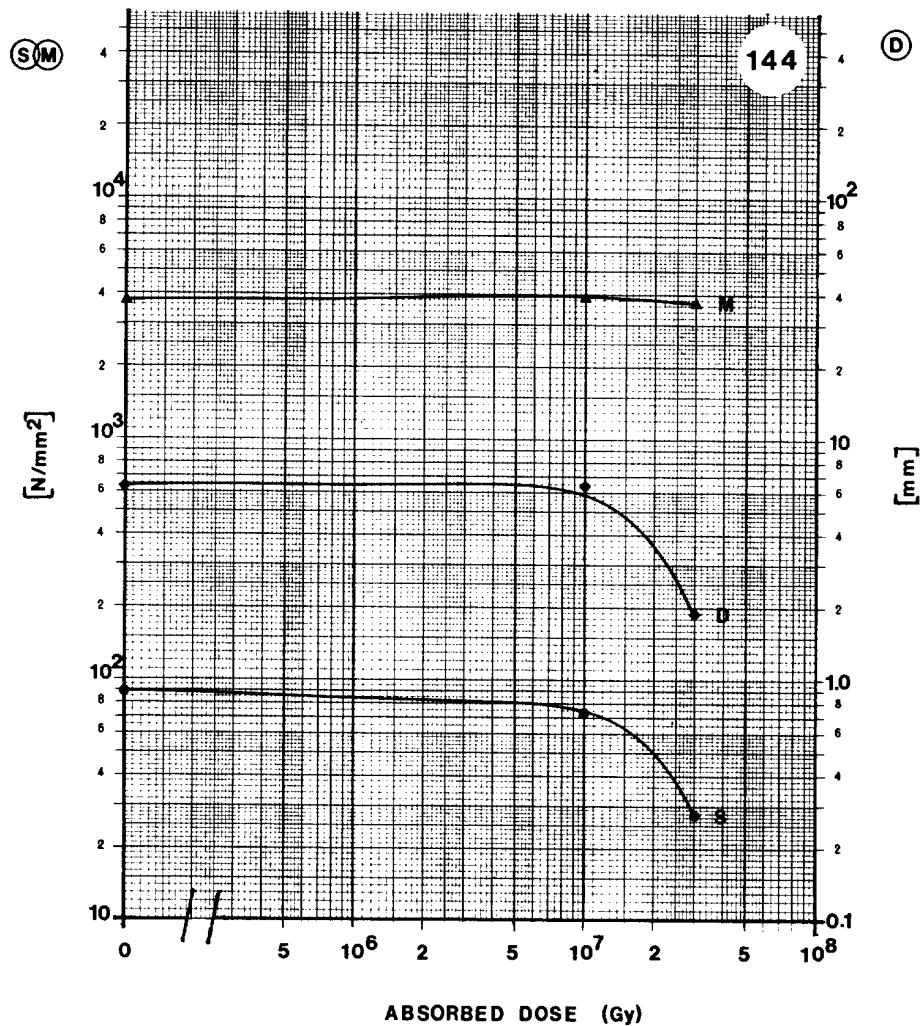
MY 740

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MATERIAL: MY 740(100) + MNA(80) + DMP 30(0.5)

SUPPLIER: PLESSEY

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	89.3 N/mm ²
D	Deflection at break	6.3 mm
M	Modulus of elasticity	3.8 × 10 ³ N/mm ²

ARALDITE

MY 745

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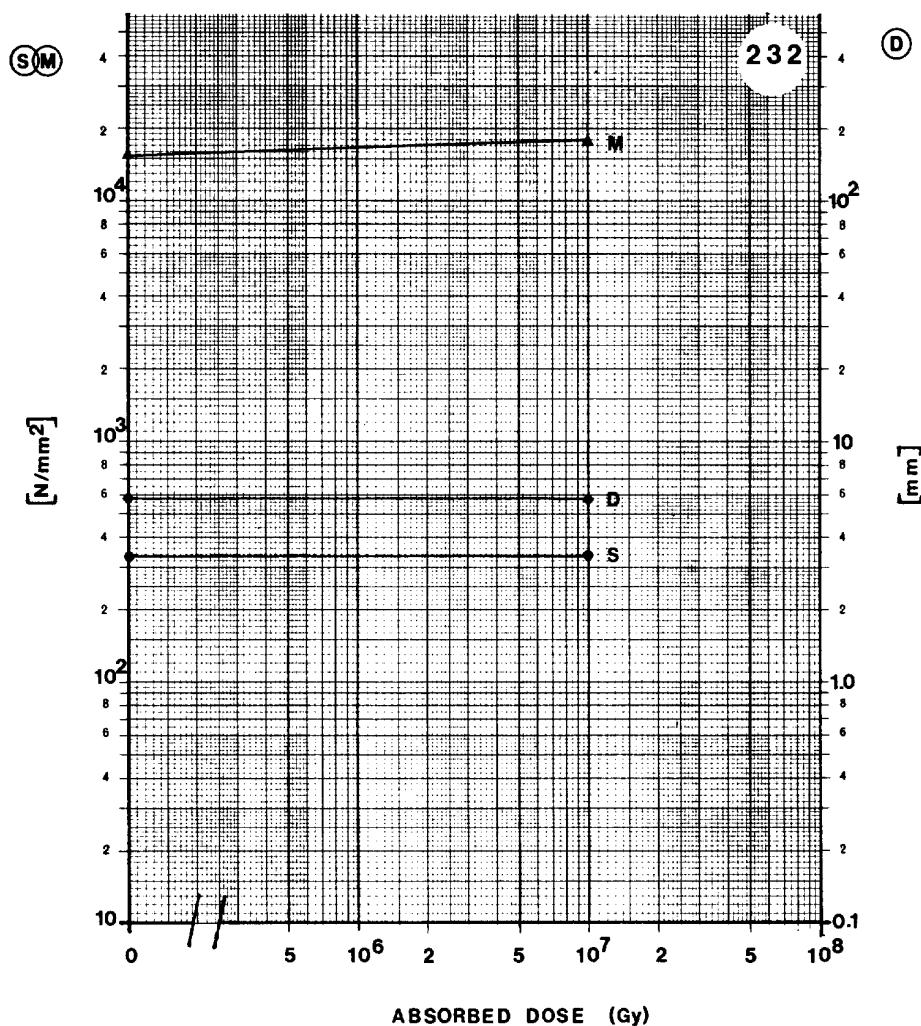
No.	Material and Supplier	Dose (Gy)	Ultimate flex. strength S (N/mm ²)	Deflexion at break D (mm)	Modulus of elasticity M (N/mm ²)
232	MY 745 + HY 906 + XB 2687 + + glass ALSTHOM	0 1×10^7	333.5 ± 56.9 336.5 ± 27.5	5.9 ± 0.5 5.8 ± 0.7	$1.53 \pm 0.15 \times 10^4$ $1.77 \pm 0.13 \times 10^4$
240 (a)	MY 745(100) + HY 906(90) + + XB 2687(1.5) 12 h 125 °C CIBA-GEIGY	0	118.8 ± 10.0	6.5 ± 0.8	$3.64 \pm 0.07 \times 10^3$
298	MY 745(100) + HY 906(90) + + XB 2687(1.5) 5 h 110 °C + 16 h 125 °C CIBA-GEIGY	0 5×10^6 1×10^7 2.5×10^7 5×10^7	100.4 ± 37.3 118.8 ± 32.4 100.0 ± 44.1 48.1 ± 17.7 13.7 ± 2.9	8.3 ± 4.0 11.2 ± 4.1 7.0 ± 3.5 2.9 ± 1.1 1.2 ± 0.4	$3.68 \pm 0.04 \times 10^3$ $3.65 \pm 0.12 \times 10^3$ $4.08 \pm 0.10 \times 10^3$ $4.20 \pm 0.21 \times 10^3$ $3.42 \pm 0.00 \times 10^3$
299	MY 745(100) + HY 906(90) + + XB 2687(1.5) 24 h 125 °C CIBA-GEIGY	0 5×10^6 1×10^7 2.5×10^7 5×10^7	107.7 ± 20.6 114.9 ± 34.3 68.7 ± 21.6 36.3 ± 8.8 8.8 ± 1.96	7.9 ± 2.0 9.3 ± 3.3 4.4 ± 1.3 2.2 ± 0.5 0.6 ± 0.2	$3.84 \pm 0.15 \times 10^3$ $3.76 \pm 0.12 \times 10^3$ $4.02 \pm 0.16 \times 10^3$ $4.25 \pm 0.24 \times 10^3$ $3.21 \pm 0.00 \times 10^3$

(a) No graph.

MATERIAL: MY 745 + HY 906 + XB 2687 + GLASS

SUPPLIER: ALSTHOM

Remarks: RESIN USED FOR SPS DIPOLE MAGNETS



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	333.5 N/mm^2
D	Deflexion at break	5.9 mm
M	Modulus of elasticity	$1.5 \times 10^4 \text{ N/mm}^2$

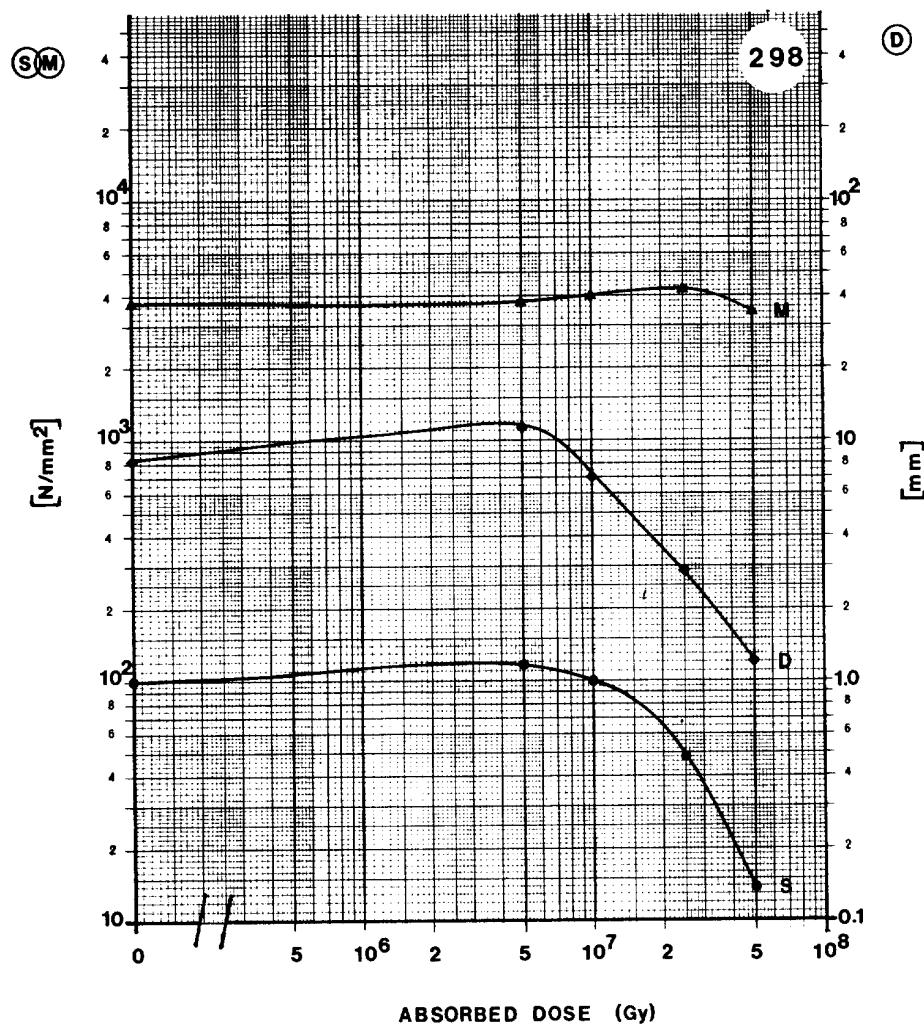
ARALDITE MY745

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MATERIAL: MY 745(100) + HY 906(90) + XB 2687(1.5)

SUPPLIER: CIBA-GEIGY

Remarks: RESIN USED FOR SPS DIPOLE MAGNETS



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	100.4 N/mm ²
D	Deflection at break	8.3 mm
M	Modulus of elasticity	3.7 × 10 ³ N/mm ²

ARALDITE

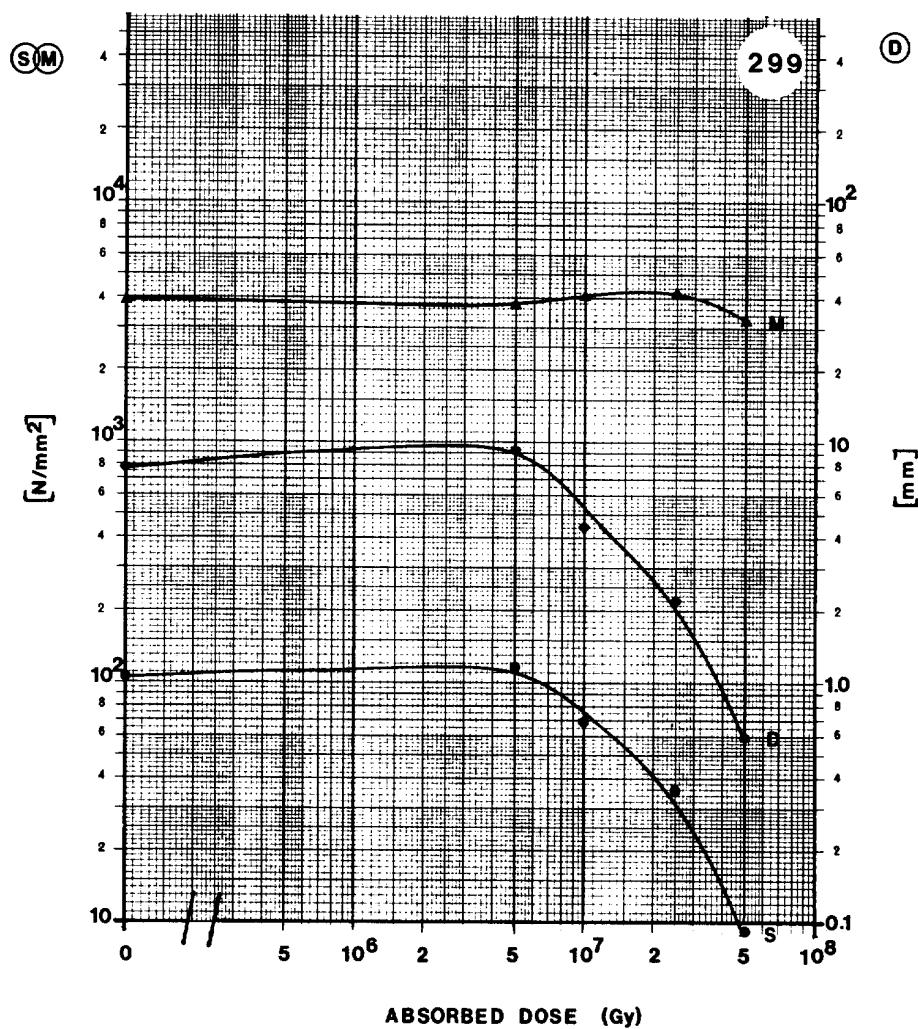
MY 745

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MATERIAL: MY 745(100) + HY 906(90) + XB 2687(1.5)

SUPPLIER: CIBA-GEIGY

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	107.7 N/mm ²
D	Deflexion at break	7.9 mm
M	Modulus of elasticity	3.8 × 10 ³ N/mm ²

ARALDITE
MY 720

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Base resin

liquid unmodified epoxy resin based on TGDM

ARALDITE

MY 720

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No.	Material and Supplier	Dose (Gy)	Ultimate flex. strength S (N/mm ²)	Deflexion at break D (mm)	Modulus of elasticity M (N/mm ²)
88	MY 720 + HY 906 LINTOTT	0	79.5 ± 11.8	3.9 ± 0.5	3.87 ± 0.15 × 10 ³
		5.5 × 10 ⁶	73.6 ± 20.6	3.8 ± 1.1	3.61 ± 0.64 × 10 ³
		1 × 10 ⁷	58.9 ± 20.6	2.7 ± 0.9	3.94 ± 0.39 × 10 ³
		2.3 × 10 ⁷	37.3 ± 6.9	1.6 ± 0.2	4.42 ± 0.79 × 10 ³
		5.5 × 10 ⁷	15.7 ± 6.9	0.8 ± 0.2	3.26 ± 0.44 × 10 ³
101	Magnet coil resin type B reinforced with fibre- silanized glass tape type 1 (Base: TGDM + MNA + other components) (cut to fibre) BBC Baden	0	421.8 ± 83.4	3.5 ± 0.4	2.77 ± 0.13 × 10 ⁴
		1.2 × 10 ⁷	478.8 ± 5.9	3.7 ± 0.2	2.79 ± 0.12 × 10 ⁴
		3.6 × 10 ⁷	451.3 ± 23.5	3.5 ± 0.1	2.75 ± 0.20 × 10 ⁴
		7.2 × 10 ⁷	337.5 ± 33.4		2.55 ± 0.10 × 10 ⁴

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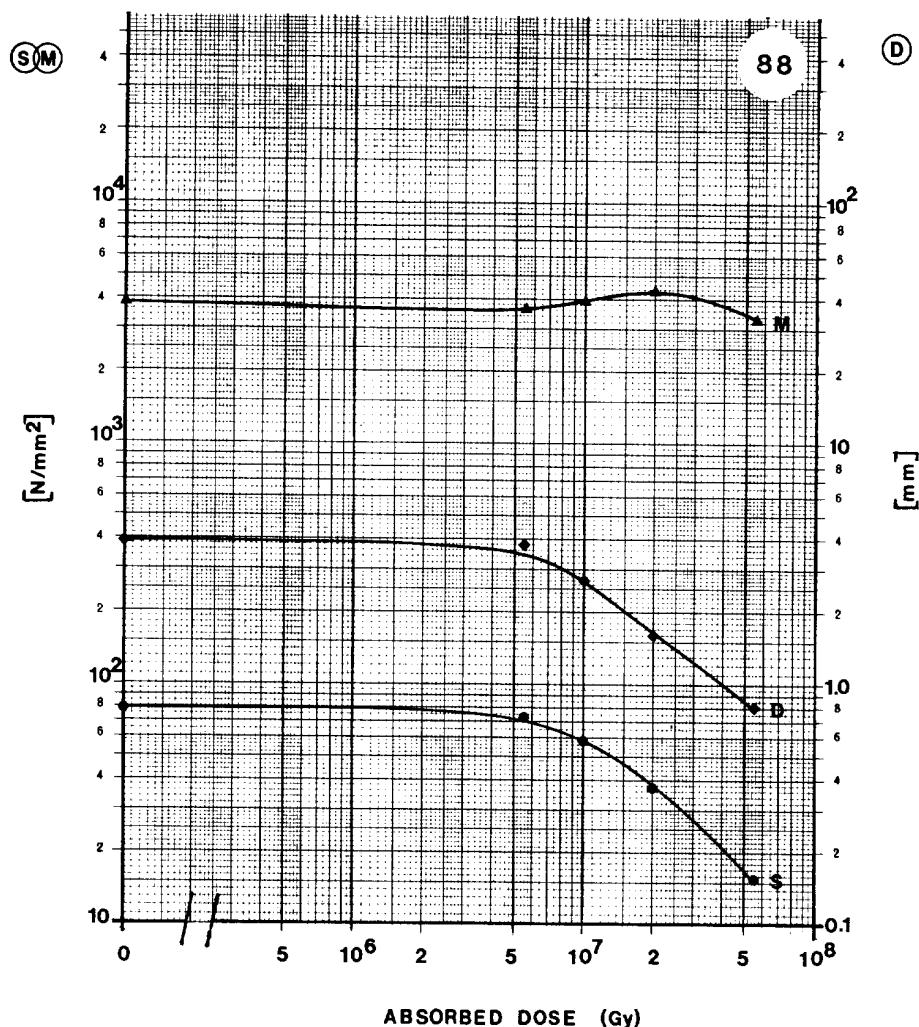
MY 720

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MATERIAL: MY 720 + HY 906

SUPPLIER: LINTOTT

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	79.5 N/mm ²
D	Deflexion at break	3.9 mm
M	Modulus of elasticity	3.9 × 10 ³ N/mm ²

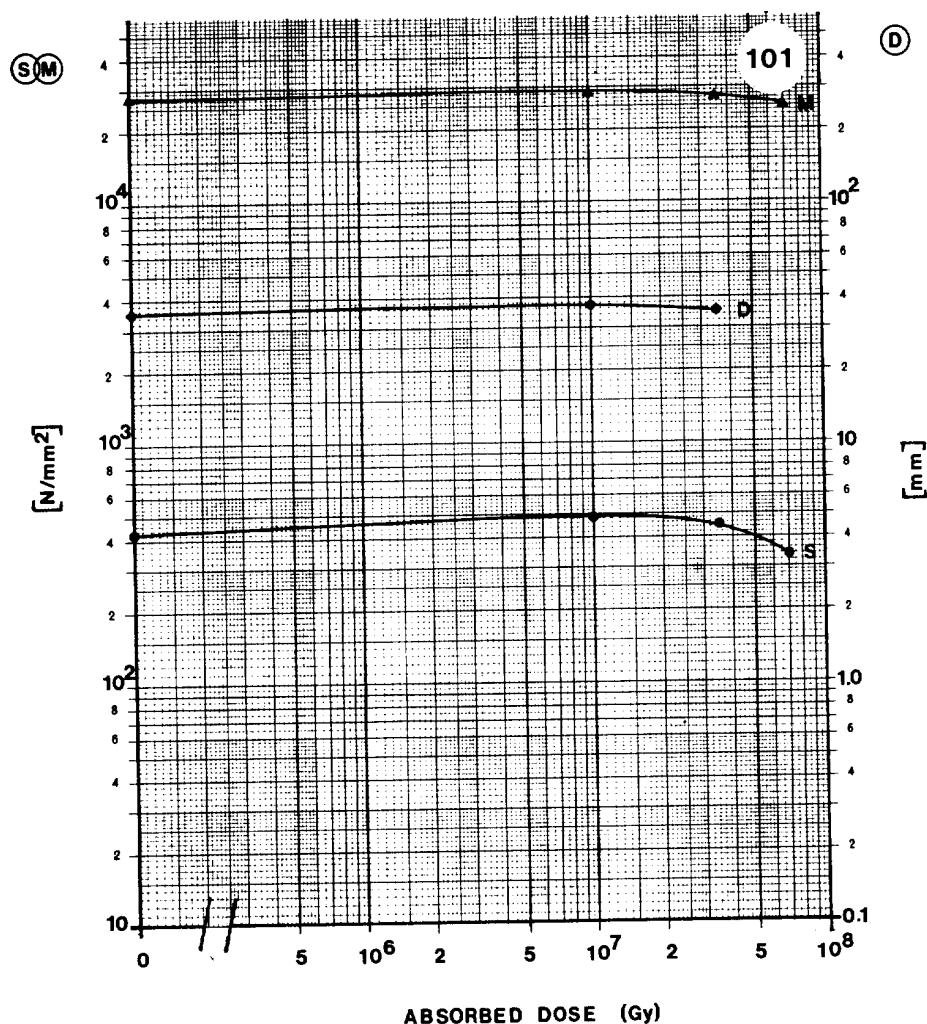
ARALDITE MY 720

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MATERIAL: MAGNET COIL RESIN TYPE B REINFORCED WITH FIBRE-SILANIZED GLASS TAPE TYPE 1 (BASE: TGDM + MMA + + OTHER COMPONENTS)

SUPPLIER: BBC BADEN

Remarks:



CURVE	PROPERTY	INITIAL VALUE
S	Ultimate flexural strength	421.8 N/mm ²
D	Deflexion at break	3.5 mm
M	Modulus of elasticity	2.8 × 10 ⁴ N/mm ²